EXHIBIT A

Wilson Creek Road Decommissioning and Fish Habitat Restoration Project Phase III

SCOPE OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Implement site specific erosion control measures to protect and improve salmonid spawning and rearing habitat for Chinook and coho salmon, and steelhead trout in a selected section of Wilson Creek, tributary to the Pacific Ocean in Del Norte County, California. The objective is to save approximately 11,546 cubic yards of potential sediment delivery by dispersing road runoff on 2.7 miles of road, reestablishing natural drainage patterns at approximately 15 stream crossings and removing or stabilizing sediment from 11 sites along the alignment. Fish passage will be improved at 3 sites providing access to approximately 1,320 feet of habitat.

2. Conduct work on abandoned and seasonal roads in the Wilson Creek watershed beginning approximately 4.0 miles upstream from the confluence with the Pacific Ocean. The W10 Road project is located in Township 15N, Range 1E, Section 32 and Township 14N, Range 1E, Section 5 of the Childs Hill 7.5 Minute U.S.G.S. Quadrangle, 41.645 N latitude and 124.0880 W longitude. The W120 Road is located in Township 14N, Range 1E, Sections 17 and 8 of the Requa 7.5 Minute U.S.G.S. Quadrangle, as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

3. Decommission 2.7 miles of road at 26 sites thereby saving approximately 11,546 cubic yards of sediment from delivery to Wilson Creek. The Grantee shall decommission 15 stream crossings including 14 culvert crossings. The Grantee will treat 6 landslides and 5 "other" sites including concentrated road surface drainage. The following treatments will be implemented where appropriate:
   - Excavation of in-place stream crossings at locations where roads or landings were built across stream channels. This includes complete excavation of the fill, including the culvert or Humboldt log crossing so the original stream bed and side slopes are exhumed. A stream crossing excavation includes removing the culvert and the underlying and the adjacent fill material. Complete excavation of stream crossing fills, includes 100 year flood channel bottom widths and 2:1 or otherwise stable side slopes. When possible the excavated spoil will be stored at nearby stable locations where it will not erode. If there is a limited amount of stable storage locations at the excavation site the crossing fill material will be hauled off-site for storage.
   - Road surface treatments: 1) ripping of the surface of the road or landing using mechanical rippers to reduce surface runoff and improve revegetation; 2) in-place outsloping or the excavation of unstable side cast material that could fail and deliver sediment to a stream along the outside edge of a road prism or landing and

the replacement of the spoil on the roadbed against the corresponding adjacent cutbank, or in close proximity of the site; 3) exported out-sloping which involves not placing the material against the cutbank so the material is end hauled to a spoil disposal site; 4) installation of cross drains or deep water bars at 50, 75, 100 or 200 foot intervals or as necessary at springs and seeps to disperse road surface runoff. The cross road drains provide road surface drainage and prevent the collection of concentrated runoff on the former roadbed.

- Seeding and mulching of all exposed soils which may deliver sediment to a stream. Woody debris will be concentrated on finished slopes adjacent to stream crossings. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years.

4. Plant approximately 1,940 established native riparian trees within the project area. Mulching and seeding will take place as sites are completed to avoid unforeseen erosion. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings. The standard for success is 80% survival of plantings, after a period of three years.

5. All crossings treated in fish bearing reaches of streams will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for adult and juvenile salmonid fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*.

6. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.

7. Sites which are expected to erode and deliver sediment to the stream are the only locations where work will be authorized for reimbursement under the terms of this agreement. Reimbursement will not be authorized for work done to improve aesthetics only.

8. Notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
   - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
   - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
   - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species

Act, June 2000.

- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

9. All road decommissioning will be done in accordance with techniques described in the Handbook for Forest and Ranch Roads, (PWA, 1994c.) and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part X, January 2004. All road decommissioning and upgrade sites and techniques shall be approved by the Grant Manager before any equipment work takes place.

10. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*, Flosi et al and the *California Salmonid Stream Habitat Restoration Manual*, Third Edition, Volume II, Part XI, January 2004.

11. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

12. If the project will not be completed by March 31, 2012, and therefore the grantee will be requesting an amendment for time, this request and a justification for the delay resulting in the time request must be submitted no later than December 1, 2011.

13. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:

    - Implementation start and end dates
    - Percentage of the project completed in total to date
    - Dewatering and fish relocation on DFG data sheet (to be provided by the DFG Grant Manager upon request)
    - Project start and end dates for work to be implemented the following season

    The annual report will also include, on a site by site basis:

    - Road length segment decommissioned or upgraded per road segment
    - Sediment spoils volume estimate per road segment
    - Upslope stream crossings decommissioned (not for fish passage)
    - Stream crossings treated to improve fish passage (number)
    - Stream crossing upgraded
    - Stream length opened for fish passage by improving stream crossings (miles)
    - Sediment volume prevented from entering the stream per crossing
    - Sediment spoils volume estimate per crossing

- Upslope area treated (sq ft) (landslides, bank stabilization)
- Amount of riparian area treated per site in acres
- Number of trees planted

14. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, Microsoft Word compatible, copy on a CD. The report shall include, but not necessarily be limited to the following information:
    - Grant number
    - Project name
    - Geographic area (e.g., watershed name)
    - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
    - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
    - Project start and end dates and the number of person hours expended
    - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
    - Expected benefits to anadromous salmonids from the project
    - Labeled before and after photographs of any restoration activities and techniques
    - Specific project access using public and private roads and trails, with landowner name and address
    - Complete as built project description
    - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HU)
(Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Total acres of upslope area treated.
- Total miles of road treated.
- Miles of road treated for road drainage system improvements.

- Miles of road decommissioned.
- Number of cubic yards of sediment saved from entering the stream.

Fish Passage Improvement Projects (HB):

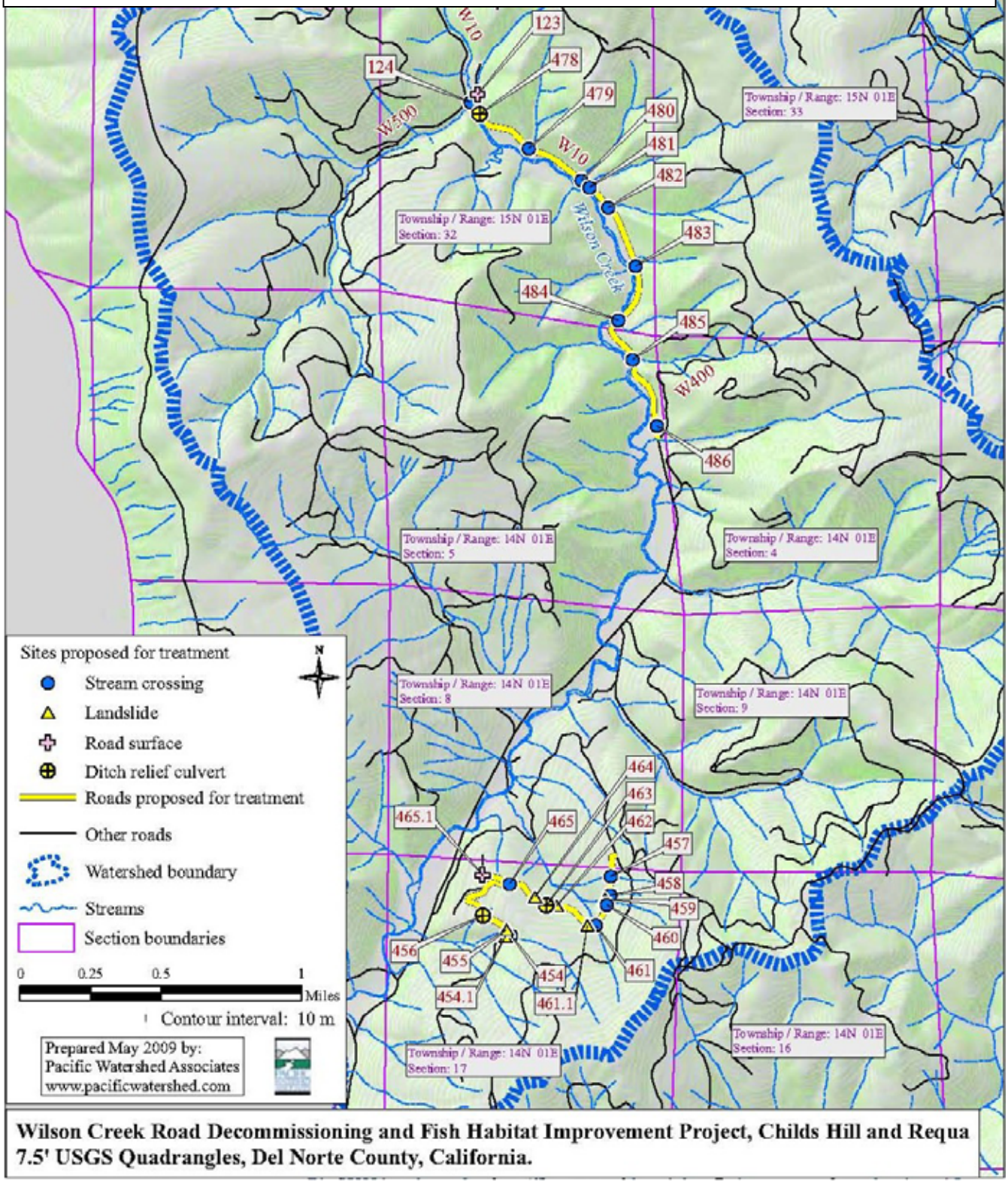
- Miles of stream treated.
- Types of crossings treated, select from: culvert, bridge or ford.
- Miles of stream made more accessible by treating stream crossings.
- Number of road crossings removed.
- Number of barriers other than culverts treated for fish passage.
- Miles of stream made more accessible by removing barriers other than culverts.

Riparian Habitat Projects (HR, HS)

- Miles of stream treated overall, count stream reach only once.
- Miles of riparian stream bank treated, measure both sides of the bank.
- Total acres of riparian area treated.
- Acres of riparian area planted.
- Species scientific names of plants planted.

15. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Wilson Creek Road Decommissioning and Fish Habitat Restoration Project, Phase III.

Exhibit C
Wilson Creek Road Decommissioning and Fish Habitat Restoration Project Phase III
Project Location Map
T15N, R1E, S32; T14N, R1E, S5; T14N, R1E, S8 & 17 Childs Hill & Requa Quads
Del Norte County



Wilson Creek Road Decommissioning and Fish Habitat Improvement Project, Childs Hill and Requa 7.5' USGS Quadrangles, Del Norte County, California.

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
Possible Species within the Requa and Childs Hill Quads and Surrounding Quads for:
Wilson Creek Road Decommissioning and Fish Habitat Restoration Project Phase III
T15N, R1E, S32; T14N, R1E, S5; T14N, R1E, S8 & 17
United States

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Butte County morning-glory *Calystegia atriplicifolia ssp. buttensis*	PDCON04012			G5T3	S3	4.2
2	California globe mallow *Iliamna latibracteata*	PDMAL0K040			G3	S2.2	1B.2
3	Chace juga *Juga chacei*	IMGASK4180			G1	S1	
4	Coast Range lomatium *Lomatium martindalei*	PDAPI1B140			G5	S2.3	2.3
5	Coastal Brackish Marsh	CTT52200CA			G2	S2.1	
6	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
7	Darlingtonia Seep	CTT51120CA			G4	S3.2	
8	Del Norte buckwheat *Eriogonum nudum var. paralinum*	PDPGN08498			G5T2T4	S2?	2.2
9	Del Norte pyrrocoma *Pyrrocoma racemosa var. congesta*	PDASTDT0F4			G5T4	S2.3	2.3
10	Del Norte salamander *Plethodon elongatus*	AAAAD12050			G4	S3	SC
11	Fort Dick limnephilus caddisfly *Limnephilus atercus*	IITRI15020			G4	S1	
12	Henderson's fawn lily *Erythronium hendersonii*	PMLIL0U070			G4	S1.3	2.3
13	Hippolyta frittilary *Speyeria zerene hippolyta*	IILEPJ6087	Threatened		G5T1	S1	
14	Howell's fawn lily *Erythronium howellii*	PMLIL0U080			G3G4	S2.3	1B.3
15	Howell's jewel-flower *Streptanthus howellii*	PDBRA2G0N0			G2	S1.2	1B.2
16	Howell's sandwort *Minuartia howellii*	PDCAR0G0F0			G4	S3.2	1B.3
17	Humboldt marten *Martes americana humboldtensis*	AMAJF01012			G5T2T3	S2S3	SC
18	Koehler's stipitate rock-cress *Arabis koehleri var. stipitata*	PDBRA060Z2			G3T3	S1.3	1B.3
19	Langsdorf's violet *Viola langsdorfii*	PDVIO04100			G4	S1.1	2.1
20	Lyngbye's sedge *Carex lyngbyei*	PMCYP037Y0			G5	S2.2	2.2
21	Mcdonald's rock-cress *Arabis macdonaldiana*	PDBRA06150	Endangered	Endangered	G2	S2.1	1B.1
22	Mendocino gentian *Gentiana setigera*	PDGEN060S0			G2	S1	1B.2
23	Northern Coastal Salt Marsh	CTT52110CA			G3	S3.2	

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24	Nuttall's saxifrage *Saxifraga nuttallii*	PDSAX0U160			G4?	S1.1	2.1
25	Oregon coast paintbrush *Castilleja affinis ssp. litoralis*	PDSCR0D012			G4G5T4	S2.2	2.2
26	Oregon goldthread *Coptis laciniata*	PDRAN0A020			G4G5	S2.2	2.2
27	Oregon polemonium *Polemonium carneum*	PDPLM0E050			G4	S1	2.2
28	Pacific fisher *Martes pennanti (pacifica) DPS*	AMAJF01021	Candidate	unknown code...	G5	S2S3	SC
29	Pacific gilia *Gilia capitata ssp. pacifica*	PDPLM040B6			G5T3T4	S2.2?	1B.2
30	Pacific tailed frog *Ascaphus truei*	AAABA01010			G4	S2S3	SC
31	Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0			G3	S3.2	1B.2
32	Siskiyou checkerbloom *Sidalcea malviflora ssp. patula*	PDMAL110F9			G5T1	S1.1	1B.2
33	Siskiyou paintbrush *Castilleja miniata ssp. elata*	PDSCR0D213			G5T3	S2.2	2.2
34	Sonoma tree vole *Arborimus pomo*	AMAFF23030			G3	S3	SC
35	Steller (=northern) sea-lion *Eumetopias jubatus*	AMAJC03010	Threatened		G3	S2	
36	Thurber's reed grass *Calamagrostis crassiglumis*	PMPOA17070			G3Q	S1.2	2.1
37	Tracy's romanzoffia *Romanzoffia tracyi*	PDHYD0E030			G4	S1.3	2.3
38	Waldo wild buckwheat *Eriogonum pendulum*	PDPGN084Q0			G4	S2.2	2.2
39	Wolf's evening-primrose *Oenothera wolfii*	PDONA0C1K0			G1	S1.1	1B.1
40	Yontocket satyr *Coenonympha tullia yontockett*	IILEPN6035			G5T1T2	S1	
41	Yuma myotis *Myotis yumanensis*	AMACC01020			G5	S4?	
42	alpine marsh violet *Viola palustris*	PDVIO041G0			G5	S1S2	2.2
43	arctic spoonwort *Cochlearia officinalis var. arctica*	PDBRA0S032			G5T3T4	S1.3	2.3
44	arctic starflower *Trientalis arctica*	PDPRI0A030			G5	S1.2	2.2
45	bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S2	

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
46	black swift *Cypseloides niger*	ABNUA01010			G4	S2	SC
47	bristle-stalked sedge *Carex leptalea*	PMCYP037E0			G5	S2?	2.2
48	cackling (=Aleutian Canada) goose *Branta hutchinsii leucopareia*	ABNJB05035	Delisted		G5T4	S2	
49	coast cutthroat trout *Oncorhynchus clarkii clarkii*	AFCHA0208A			G4T4	S3	SC
50	coast fawn lily *Erythronium revolutum*	PMLIL0U0F0			G4	S3	2.2
51	coast sidalcea *Sidalcea oregana ssp. eximia*	PDMAL110K9			G5T1	S1.2	1B.2
52	coastal triquetrella *Triquetrella californica*	NBMUS7S010			G1	S1.2	1B.2
53	dark-eyed gilia *Gilia millefoliata*	PDPLM04130			G2	S2.2	1B.2
54	double-crested cormorant *Phalacrocorax auritus*	ABNFD01020			G5	S3	
55	fibrous pondweed *Potamogeton foliosus var. fibrillosus*	PMPOT030B1			G5T2T4	S1S2	2.3
56	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
57	fork-tailed storm-petrel *Oceanodroma furcata*	ABNDC04010			G5	S1	SC
58	fringed myotis *Myotis thysanodes*	AMACC01090			G4G5	S4	
59	ghost-pipe *Monotropa uniflora*	PDMON03030			G5	S2S3	2.2
60	giant fawn lily *Erythronium oregonum*	PMLIL0U0C0			G5	S2.2	2.2
61	great blue heron *Ardea herodias*	ABNGA04010			G5	S4	
62	great burnet *Sanguisorba officinalis*	PDROS1L060			G5?	S2.2	2.2
63	green yellow sedge *Carex viridula var. viridula*	PMCYP03EM3			G5T5	S1.3	2.3
64	horned butterwort *Pinguicula macroceras*	PDLNT01040			G5	S3.2	2.2
65	lagoon sedge *Carex lenticularis var. limnophila*	PMCYP037A7			G5T5	S1S2.2	2.2
66	leafy reed grass *Calamagrostis foliosa*	PMPOA170C0		Rare	G3	S3.2	4.2
67	leafy-stemmed mitrewort *Mitella caulescens*	PDSAX0N020			G5	S4.2	4.2

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
68	little-leaved huckleberry *Vaccinium scoparium*	PDERI180Y0			G5	S2.2?	2.2
69	long-beard lichen *Usnea longissima*	NLLEC5P420			G4	S4.2	
70	maidenhair spleenwort *Asplenium trichomanes ssp. trichomanes*	PPASP021K2			G5T5	S2.3	2.3
71	maple-leaved checkerbloom *Sidalcea malachroides*	PDMAL110E0			G3G4	S3S4.2	4.2
72	marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3G4	S1	
73	mardon skipper *Polites mardon*	IILEP66030	Candidate		G2G3	S1	
74	marsh pea *Lathyrus palustris*	PDFAB250P0			G5	S2S3	2.2
75	minute pocket moss *Fissidens pauperculus*	NBMUS2W0U0			G3?	S1.2	1B.2
76	mountain crowberry *Empetrum nigrum ssp. hermaphroditum*	PDEMP03021			G5T5	S2?	2.2
77	naked flag moss *Discelium nudum*	NBMUS2E010			G3G4	S1.2	2.2
78	nodding vanilla-grass *Hierochloe odorata*	PMPOA35040			G5	S1.3?	2.3
79	northern meadow sedge *Carex praticola*	PMCYP03B20			G5	S2S3	2.2
80	northern red-legged frog *Rana aurora*	AAABH01021			G4T4	S2?	SC
81	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
82	opposite-leaved lewisia *Lewisia oppositifolia*	PDPOR040B0			G4	S2.2	2.2
83	osprey *Pandion haliaetus*	ABNKC01010			G5	S3	
84	pink sand-verbena *Abronia umbellata ssp. breviflora*	PDNYC010N2			G4G5T2	S2.1	1B.1
85	rhinoceros auklet *Cerorhinca monocerata*	ABNNN11010			G5	S3	
86	rocky coast Pacific sideband *Monadenia fidelis pronotis*	IMGASC7032			G4G5T1	S1	
87	ruffed grouse *Bonasa umbellus*	ABNLC11010			G5	S4	
88	sand dune phacelia *Phacelia argentea*	PDHYD0C070			G2	S1.1	1B.1
89	seacoast ragwort *Packera bolanderi var. bolanderi*	PDAST8H0H1			G4T4	S1.2	2.2

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
90	seaside pea *Lathyrus japonicus*	PDFAB250C0			G5	S1.1	2.1
91	serpentine catchfly *Silene serpentinicola*	PDCAR0U2B0			G2	S2.2	1B.2
92	serpentine sedge *Carex serpenticola*	PMCYP03KM0			G4	S2.3	2.3
93	short-leaved evax *Hesperevax sparsiflora var. brevifolia*	PDASTE5011			G4T2T3	S2S3	1B.2
94	silver-haired bat *Lasionycteris noctivagans*	AMACC02010			G5	S3S4	
95	southern torrent salamander *Rhyacotriton variegatus*	AAAAJ01020			G3G4	S2S3	SC
96	summer-run steelhead trout *Oncorhynchus mykiss irideus*	AFCHA0213B			G5T4Q	S2	SC
97	tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered		G3	S2S3	SC
98	tufted puffin *Fratercula cirrhata*	ABNNN12010			G5	S2	SC
99	western lily *Lilium occidentale*	PMLIL1A0G0	Endangered	Endangered	G1	S1.2	1B.1
100	western ragwort *Packera hesperia*	PDAST8H1L0			G3	S1.2	2.2
101	western snowy plover *Charadrius alexandrinus nivosus*	ABNNB03031	Threatened		G4T3	S2	SC
102	western white bog violet *Viola primulifolia ssp. occidentalis*	PDVIO040Y2			G5T2	S2.2	1B.2
103	white-flowered rein orchid *Piperia candida*	PMORC1X050			G3	S3.2	1B.2
104	white-tailed kite *Elanus leucurus*	ABNKC06010			G5	S3	
105	willow flycatcher *Empidonax traillii*	ABPAE33040		Endangered	G5	S1S2	
106	yellow-tubered toothwort *Cardamine nuttallii var. gemmata*	PDBRA0K0R3			G5T3	S2.2	1B.3